Date: Wed, 8 Sep 93 07:13:02 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1062
To: Info-Hams

Info-Hams Digest   Wed, 8 Sep 93   Volume 93 : Issue 1062

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Sep 93 13:20:00 GMT
From: ogicse!uwm.edu!cs.utexas.edu!TAMUTS.TAMU.EDU!zeus.tamu.edu!
tskloss@network.ucsd.edu
Subject: Co-ax Question...
To: info-hams@ucsd.edu

In article <1993Sep7.170216.1@vaxc.stevens-tech.edu>, sarmstro@vaxc.stevens-
tech.edu writes...
>   I'm planning on buying a Diamond X-300A 2m/440 antenna, and
>hooking it up to my HT, an Icom W2-A. (At least until I get another rig).
>The main question that I have is about what kind of Co-ax to use. Should I go
>with RG-8 (U or A), or should I use the RG-213? I'm going to be
>running about 10-15 feet, mostly on the outside of the house. In the
>near future, I also want to get an amplifier, if that has any bearing

>on the Co-Ax use. This is the first antenna I'll be buying since I've
>only had my license about 3 months, so I don't want to screw up...
>
I can appreciate doing it right the first time, and the feedline can be the performance limiting element an a given system. But let's look at the numbers:

Belden	Cable	frequency/MHz	dB loss /100 ft.
8219	RG-58A/U 100	4.5	
	400	9.5	
8259	RG-58A/U 100	4.9	
	400	11.5	
8237	RG-8U 100	1.9	
	400	4.1	

(funny, RG-215 is not in the Belden Master Catalog...)

10 to 15 ft run would have an attenuation of 1/10 of that specified above.

IMHO for 10 to 15 feet, unless you are doing DX work with weak signals, the smaller (read: more flexible, lighter and easier to use with an HT) RG-58 would be fine. If you plan to use 440 MHz and higher exclusively, then the cable will have more attenuating effect. I wouldn't use the larger coax unless the run was over 20 feet and is a semi-permanent installation.

Welcome to the club, I'm still waiting for my ticket :-(

-tim

/--\
* *(* (**)(* *)* *)*	Tim Skloss
* * \/ \/ * *	Texas A&M University, Dept. of Chemistry
* /=========\ *	College Station, TX 77843-3255
*	OXFORD		LABORATORY FOR MAGNETIC RESONANCE AND
	mags.	*	MOLECULAR SCIENCE
*	RULE!		voice: (409) 845-4459
|_________|	fax: (409) 845-4719
|| ||	Internet: TSKLOSS@venus.tamu.edu
== ==	My opinions do not reflect those of TAMU!
\--/

"The brain is much like a computer;
there are really no dumb people, just people running DOS!"
PowerPC - The ULTIMATE personal computing machine.

Date: Thu, 02 Sep 1993 16:54:55 -0500
From: caen!nic.umass.edu!umassd.edu!ulowell!buscard!Uucp@uunet.uu.net
Subject: I can't find my original license
To: info-hams@ucsd.edu

In article <MAS.93Sep1151726@porgy.jpl.nasa.gov> mas@porgy.jpl.nasa.gov
 (Marc A. Sarrel) writes:
>I'm looking forward to upgrading from Tech Classic to General sometime
>soon, but I can't find my original FCC license to take with me to the
>exam. I have a photocopy that I carry with me, but not the original.
>What am I to do?
>Can I get the FCC to issue a replacement original, or will the
>examiners most likely accept a photocopy anyway?
>Marc

Marc,

Examiners are not supposed to accept copies of the license. The original
is the only thing we are supposed to accept. However, if you personally
know a few of the examiners they might let you slide on this, especially
if they are the ones who gave you the original exam. They would have
records of your first test. Asking an examiner to run with a photocopy of
the original license is strictly speaking, illegal.

Now, you can get a form 610, fill it out, apply for a duplicate license,
mail it to the FCC (the address is on the 610) and in about 4 weeks you'll
receive your new license wich you can take to the test.

If you are a Tech+ and have credit for the 5 WPM, then you will definitly
need your CSCE to prove 5WPM credit since your license will have a new
date on it. If you can't find a CSCE, and you've been licensed a while,
perhaps carrying in a callbook might help with your original license.

Or, since you'll be taking the 13 WPM before the 5 WPM, you really don't
have to prove you passed the 5WPM.

Is that crystal clear? Probably not, but it's a good shot. Bottom line
easiest way: Apply for a duplicate license ASAP.

Best 73,
--
Marc B. Grant, N5MEI | marcbg@feenix.metronet.com | 214/231-3998 (voice)
P.O Box 850472 | marcbg@esy.com | 214/231-0025 (fax)
Richardson, TX 75085 | |

Date: Wed, 8 Sep 93 08:13:34 GMT
From: pipex!sunic!trane.uninett.no!alf.uib.no!buboo@uunet.uu.net
Subject: JAMBOREE on USENET
To: info-hams@ucsd.edu

Philipp Mott:
>Hi Scouts !
>Jamboree 1995 in the Netherlands, Jamboree on the air too.
>What do you think about a Jamboree on the Usenet ?

Date: Thu, 02 Sep 1993 16:20:44 -0500
From: caen!nic.umass.edu!umassd.edu!ulowell!buscard!Uucp@uunet.uu.net
Subject: Maximal range of a CB
To: info-hams@ucsd.edu

Reply-To: shea@daytona.webo.dg.com

In article <eesnyder.746857993@beagle>, eesnyder@boulder.Colorado.EDU (Eric E. Snyder) writes:
|>
|> A couple of years ago, I was stuck out in the desert in California with
|> vehicle trouble way out in the tules. I tried in vain to get help with
|> my handheld CB... Interesting, I could hear a lot of (almost entirely)
|> Spanish speaking stations. I wonder if these weren't stations working
|> above the US legal limit in Mexico (300 km away)...
|>

Probably not. I hear Spanish speaking stations from Mexico
and South America here in the Boston area, all the time.
Like 10 meters, 11 meters is a good world wide band when skip cycles
are high. Even though it's illegal, I have talked all over the word
from both my house and car.

When condidtions are right, I simply cannot hear any local station
more than a mile or 2 from me, but Austria may come in like next door.
I figure so long as I'm otherwise legal, i.e. power, frequency etc...,
there is little harm. I guess the other alternative, when I cannot
use the radio locally, is to turn it off all together. This seems like
such a waste though.

BTW most of the above is in reference to SSB operation. In my experience
when skip is running, on AM the noise level is so high that I do just
turn it off.

Phil

Date: 8 Sep 1993 02:27:26 GMT
From: dog.ee.lbl.gov!agate!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!csn!
news.sinet.slb.com!news.San-Jose.ate.slb.com!jones@network.ucsd.edu

Subject: Newsline on GEnie? How 'bout copying to Usenet?
To: info-hams@ucsd.edu

I didn't catch much of this week's Newsline, but they did mention that
they were going to make the entire script available on GEnie. Since I
(and probably a lot of other Usenet readers) don't have access to GEnie,
I would hope that someone would be kind enough to transfer it over on
a regular basis!

                              73,
                              Clark

--
Disclaimer: The opinions expressed above are mine and not those of Schlumberger
because they are NOT covered by the patent agreement!

Phone: (602) 345-3638   Internet: jones@sj.ate.slb.com
Packet: N7RPQ@K7BUC.AZ.USA.NA   RF: N7RPQ/AA
Snail: Clark Jones, Schlumberger Technologies, 7855 S. River Pkwy #116, Tempe,
       AZ 85284-1825

Date: Thu, 02 Sep 1993 18:33:36 -0500
From: spool.mu.edu!caen!nic.umass.edu!umassd.edu!ulowell!buscard!Uucp@uunet.uu.net
Subject: Non-licensed purchase of radio
To: info-hams@ucsd.edu

In article <CCoADI.GwD@pica.army.mil> Mark Ellis,
mellis@ramcad.pica.army.mil writes:
> My question is: If I walk into Radio Shack, put money down, and say:
>   "Gimme dat HT-202, and I'll give you this money", can
>   (would) they ask to see a license before selling it to me?

No, NOBODY can ask to see a license before selling a radio to you,
because no law requires that.

 ML

Date: Thu, 02 Sep 1993 16:57:33 -0500
From: spool.mu.edu!caen!nic.umass.edu!umassd.edu!ulowell!buscard!Uucp@uunet.uu.net
Subject: Re IC765 speech processor problem.
To: info-hams@ucsd.edu

Well I tried Gene's fix and it is an improvement, however not a complete cure.
I put the rig into a dummy load (very good one) and there is still a trace of

rfi audio noise comes out of the speaker on all bands. There seems to be a RF loop somewhere in the IC 765. I will explore more.... Anyone else out there can add anything?
PA3ACQ Robin.pa

Date: Sat, 28 Aug 1993 06:28:11 GMT
From: dog.ee.lbl.gov!agate!usenet.ins.cwru.edu!gatech!destroyer!nntp.cs.ubc.ca!alberta!nebulus!ve6mgs!usenet@network.ucsd.edu
Subject: rsgb gb2rs news 29th august 1993
To: info-hams@ucsd.edu

Good morning. It's Sunday the 29th of August and here is the GB2RS news broadcast, prepared by the Radio Society of Great Britain.

First the headlines:- Historic radio equipment is on show on Portsmouth; advice for anyone worried about a missing licence reminder; and there's lighthouses galore to work this weekend.

An exhibition of wireless telegraphy and radio equipment covering the last hundred years is on board HMS Warrior this weekend. HMS Warrior is part of Portsmouth's historic dockyard and the radio exhibition is on show until tomorrow, Bank Holiday Monday, afternoon. many of the exhibits come from private collections, including that of past RSGB President Len Newnham, G6NZ. The Fareham and District Amateur Radio Club will be running a special event station throughout the event.

Members have asked the Society what they should do if they have not received a reminder from Subscription Services Ltd that their licence fee is due. If your licence is about to expire and you have not received a reminder, the recommended course of action is to send payment together with details of your name, address, callsign and licence expiry date to SSL, PO Box 885, Bristol, BS99 5LF. The Radiocommunications Agency has announced that in future licence renewal reminders will be sent out by SSL six weeks in advance, instead of four. However, if this and a final reminder are ignored the licence will be cancelled and pass slips for the RAE and Morse Test (where appropriate) will have to be produced to support the application for reinstatement.

The September edition of Radio Communication, which was posted to all RSGB members last week, contains a list of vacancies for the Society's Council. Members' attention is drawn to this, and to the procedure for nominating someone for one of these vacancies which was published in the August edition of RadCom.

Autumn sees the start of many courses for the Radio Amateurs Examination. Details of RAE courses, as well as Morse classes, have been published in the July, August and September editions of Radio Communication. In addition, we

have been notified of an RAE course in Newbury, Berkshire. For details contact Ray, G3NDS on 0672 870892. Information on Novice courses in your area can be obtained by sending a stamped self-addressed envelope to Sylvia Manco, RSGB, Lambda House, Cranborne Road, Potters Bar, Herts EN6 3JE.

This weekend eleven amateur radio stations will be operational from lighthouses in Scotland and on the Isle of Man. Operating from the Scottish mainland GB2LA is the most westerly, GB2LB the most easterly, GB2LD the most northerly and GB2LG the most southerly. Other Scottish stations include: GB2LH on the Isle of Lewis in the Outer Hebrides, GB2LK from Kelso, GB2LL on Lismore Island at the entrance to the Great Glen, GB2LM in the Shetland Islands and GB2LO in the Orkney Islands. GB2LT will operate from the Lighthouse at Turnberry Golf Course. Members of the Isle Of Man Amateur Radio Society will be on air from the Point of Ayre Lighthouse, at the Northern tip of the Isle of Man, using the call GT3FLH. An award is available to UK amateurs who work or hear seven out of the eleven stations. For further information about the awards and for other details contact Mike, GM4SUC, QTHR or telephone 0292 443127.

The launch of the Ariane spacecraft, carrying three new amateur satellites, has been postponed until the 24th of September due to a rocket malfunction. The satellites are ITAMSAT from Italy, KITSAT-2 from Korea and AMRAD from the USA.

Now some items of HF DX news from the weekly RSGB DX News Sheet which is edited by Brendan McCartney, G4DYO. From North Cook Islands, N7NKG will sign ZK1XR until next Saturday the 4th of September on SSB and CW. PA3FAC will be active again as 9M8ACP from Borneo until the end of September. An African tour by OZ1EYE will continue with his next locations being to Zambia and Guinea-Bissau. From St Paul Island, near Newfoundland, CY9R is scheduled to operate during the first week of September. Belgian stations are using the prefix OO until the end of September to celebrate the accession of their new king. V85XF is the call to be used by G3TXF in Brunei from the 4th to the 11th of September. His priorities will be WARC and LF bands, CW only. Operating frequencies include 18073 and 24893kHz.

Rally news now and we have been notified of four rallies for today, Sunday the 29th of August:

Coleraine and District Amateur Radio Group Radio Rally is being held at The Lodge Hotel, Coleraine. This features a display of latest amateur equipment, home computer technology and a limited indoor flea market. Refreshments will be available and there is talk-in on channel S22.

Galashiels and District Amateur Radio Society Open Day is at the Focus Centre, Livingston Place, Galashiels. Doors open at 11.00am. The event features the usual trade stands, a bring & buy stall and club stalls. Refreshments are available.

Gloucester Radio Rally Car Boot Sale is at Naas Lane, Quedgley, Gloucester. Follow the signposts from the M5 motorway junction 11 and 12.

Stroud Radio Club are running a bring and buy stall. There is talk-in on channel S22. The Torbay Mobile Rally is being held at the Audley Park School, Barton Road, Torquay. This is a change of venue from that originally advertised. Doors open 10.00am and there are trade stands, a bring and buy stall and refreshments.

We know of one rally taking place tomorrow, Monday the 30th:

The Huntingdonshire Amateur Radio Society Fifth Annual Bank Holiday Rally will be at St Germain Street, Huntingdon, Cambridgeshire. This is a new venue which can be found by heading for the town centre, then going round the one-way system until you see the site on your right. Trading commences at 10.00am. Attractions include trade stands, a bring & buy stall and many car boot pitches. Refreshments will be available. All pitches and parking are on hardstanding. Talk-in will be on channel S22, or via the repeater GB3OV on 433.125MHz, channel RB5. Contact David, G7DIU on 0480 431333 for further information.

We have news of four events taking place next Sunday, the 5th of September:

The Bristol Radio Rally, incorporating the Bristol Computer and Electronics Fair, will be at the Brunel Centre, Temple Meads, Station, Bristol. Doors open at 10.30 am, but disabled visitors can gain access 15 minutes earlier. The event boasts more than forty trade stands, two bring-and-buy stalls - one for equipment under 25, refreshments and ample under-cover parking. Talk-in will be available on channel S22, 145.55MHz. Further information can be obtained by calling G4YZR on 0275 834282.

The Milton Keynes and District Amateur Radio Society has its seventh Annual Radio Boot Sale next Sunday at Cranfield Airfield in Bedfordshire. The airfield can be reached via Junctions 13 or 14 of the M1. Details from Ray, G1LRU, on 0908 660798.

Also on the 5th is the Telford Amateur Radio Rally at the Telford Exhibition Centre. Doors open at 10.30 am. There will be trade stands and a flea market. Talk-in will be on channel S22, 145.55MHz, and the UHF repeater GB3TF on channel RB8, 433.200MHz. Disabled visitors are asked to contact the organisers if they require a parking permit. Further details are available from G7BWQ on 0952 770922. He should also be contacted by anyone who wishes to take an RSGB Morse Test at the rally.

And the Vange Amateur Radio Society Rally will be at the Laindon Community Centre, a short walk from Laindon railway station. Doors will open at 10.30 am and the rally includes traders, a bring and buy stall, refreshments and a free

raffle. Talk in will be on channel S22 and approach roads will be signposted. Further information can be obtained from Mike, G4NVT on 0268 543025.

The Bishop Auckland Rally, which was scheduled for the 31st of October is now to be on the following Sunday, the 7th of November. Further details from Mike, G0PRQ, on 0388 766264

Contest news next:

The RSGB SSB Field Day Contest takes place next weekend, the 4th and 5th of September on the HF bands. Full details can be found in the July edition of RadCom. Another RSGB event is a Slow CW Cumulative Contest on Monday the 6th of September. This is the first of five sessions to be held between September the 6th and October the 8th, from 1900 - 2030GMT on 3.540 - 3.580MHz. July RadCom has the power output categories and exchange details. On the VHF bands, the first 144MHz CW Cumulative Contest is next Tuesday the 31st of August from 2030 to 2300 local time. This is the first of five sessions, the last being on the 1st of November. There are only two sections: Single operator Fixed or Portable, and Listeners. For further details of these events see February RadCom page 67.

Special events stations operational this week include:

GB0BCH which will be aired by the Manchester and District Amateur Radio Society from Halcombe Brook near Bury. Operation will be for the full 72 hours over this Bank Holiday weekend. The event is in aid of the Boothhall Childrens Hospital Charity. If you hear the station on air, please give it a call as it is on sponsorship per contact. GB2CPS is on the air by courtesy of Grafton Radio Society at Chigwell Police Show next weekend, the 4th and 5th.

And now the solar factual data:

The period from the 16th to the 22nd of August has seen a major magnetic storm followed by a slow recovery to more normal conditions. The cause of the disturbance is at present not known, but there was a sudden burst of X-Ray flux. No flares were reported during the period. Sunspot counts have been very low and meaned at only 38. The solar flux levels have not changed much and averaged 92 over the period. The geomagnetic levels have been up to major storm levels. The sudden storm commencement, or SSC, began on the 15th at 1514 and reached an Ap index of 64 units on the 16th. This is about K7 - the highest level since last September. By the 19th, there was a slow decline to quiet, with levels of only 6 units by the 22nd. The period averaged 22.8 units. The state has been 'major mag storm in progress' up to the 19th, then 'nil, nothing to report'. The radio quality indices collapsed on the 16th to very poor, with the Boulder Fort Collins and New York circuits being almost useless. Levels recovered to normal by the 21st. The aa indices, as supplied by the British Geological Survey for the 10th to the 16th of August, were quiet up to the mag storm on the 15th, with the 14th having a daily index of

only 5.5 nanoTeslas. However the storm raised levels to 115 nanoTeslas during the evening of the 16th, giving a daily index of 88.9 nanoTeslas. The period averaged a daily index of 22.6 nanoTeslas. Despite an expectation that the more active side of the sun would come into view, the X-Ray flux declined every day, apart from a burst to B1.4 on the 16th. It was down to only A6.7 units by the 22nd, with the period averaging A8.9 units. Since January when this data was first given on GB2RS, the average levels have dropped considerably, by about 50 times. It is not possible to say how normal this is for this part of the cycle, but it seems a big reduction.

Now the ionospheric data for Central France:

The F2 daytime critical frequencies at Poitiers, as reported by Meudon for the 16th and 17th, are not available. This often happens with major magnetic storms which disrupt the ionosonde, making readings extremely difficult. However we have data for the 18th to the 22nd. Levels rose reaching 8.8MHz on the 21st and averaged 7.9MHz. The peak times are now around 19.00 to 20.00 hours. The darkness hour lows have not varied much and averaged 3.3MHz, with the minimum levels being now around 03.00 hours. Blanketing E and Spread F has been reported some days.

Now the ionospheric data for the north:

The F2 daytime critical frequencies at Ekaterinberg were seriously affected by the mag storm with some readings unobtainable, possibly due to severe absorption. The highs averaged about 6.6MHz and the lows about 3.8MHz. Proton events have been measured by satellites since 1966 covering cycles 20, 21, and the present cycle 22. Cycle 19 has inferred data obtained by other means. The pattern is very clear, proton events are increasing at an alarming rate; they have doubled since cycle 20, and far exceed those of cycle 19 which was reckoned to be the biggest cycle so far recorded. Many of these events are also now being recorded as ground level events.

And lastly the solar forecast:

This week, the active side of the sun will be rotating away. Solar flux levels are expected to be at about the 90s. Geomagnetic activity is expected to be unsettled at first due to coronal holes, but becoming quieter as the week proceeds. Ionospheric levels and the radio quality indices are expected to be below normal at first but rising to normal or just above normal later in the week.

And that is the end of the solar information.

Finally in the main news, SSL has informed the Society that as of last Wednesday morning, the latest callsigns issued were in the G0 U B

and G7 R B series, and Novice calls in the 2 0 A G and 2 1 C F series.

You're listening to GB2RS, the news broadcasting service of the Radio Society of Great Britain, transmitting in the 80, 40, 6 and 2 metre bands.

Date: 7 Sep 93 14:21:51 GMT
From: ogicse!uwm.edu!wupost!trinews.sbc.com!rvt@network.ucsd.edu
Subject: Yagi for Cellular Phone?
To: info-hams@ucsd.edu

In article <wier-060993102939@192.43.199.220> wier@merlin.etsu.edu (Bob Wier) writes:
>I've just joined the cellular phone ranks ... Dallas
>is a very hot cellular market and there are pretty attractive
>deals (not that I'm dissatisified with 2 meters :-).
>
Hello Bob, I guess you're back in civilization. Be sure to check the roaming charges in Colorado.

>One thing I'd like to be able to do is to take it to
>a place I own in S.W. Colorado way back in the mountains.
>It would be nice to be able to use the phone up at our cabin,
>especially when non - hams visit and I'm not around.
>I did some checking and found that the company which owns
>the cellular license there has no intention of building a
>cell in the forseeable future (that p*sses me off! Sounds
>like something that should be challenged legally - use it or
>lose it).

I suspect the system is operating in complete agreement with FCC requirements for population or geographic coverage in the CGSA or RSA they are licensed for. The FCC recognizes cellular systems are a business and not a philanthropic venture. Here are a few things you might think about in evaluating your situation. In the United States, total capital investment allocated to a cell site is in the range of $1,000,000. Each cell serves, on average, about 1000 customers. Will the costs of putting a cell site in your area justify the investment? Are there 1000 potential subscribers in your area? If it were your money, would you build one?

EIA/TIA Standard 553, "Mobile Station - Land Station Compatibility Specification," covers analog cellular mobile station power levels. Many people don't know the cellular system controls the mobile unit power levels to reduce adjacent and co-channel

interference. A 0.6 watt portable is known in IS-553 as
a Class III mobile station of -2 dbW. This type of station
is set to one of 6 power levels from the -2 dbW maximum to
-22 dbW. A Class I conventional mobile station has a maximum
power level of +6dbW or 4 watts. These power levels are ERP
with respect to a half-wave dipole. This specification is available
from the EIA for $27.00. The address is:

Electronic Industries Association
Engineering Department
2001 Pennsylvania Ave. N.W.
Washington, D.C. 20006

If you are in the primary coverage area of a cell, the system
will command your mobile to the appropriate power level without
regard to the type of antenna used. If the minimum power level
the mobile station can assume still hits the cell site rx too
hard, the mobile can be locked out as a defective unit.

Using a beam antenna from far away can make your mobile station
appear to be within the primary coverage of the cell site and
it should operate in a normal manner. I am not familiar with
any prohibition concerning use of gain antennas, but the system
will assume IS-553 requirements on ERP are met.

>I wonder if you might be able to get Down East Microwave to custom
>cut you a yagi for 850 Mhz?
>
>Any suggestions appreciated!
>
Many manufacturers produce cellular yagis. One could
hack together a 6 or 8 element yagi out of a broomstick and
coathangers and try it. Assuming performance is as desired, a
better antenna could be constructed or purchased.

>73's de WB5KXH
>
>======== insert usual disclaimers here ============
> Bob Wier, East Texas State U., Commerce, Texas
> wier@merlin.etsu.edu (watch for address change)

The information in this posting is pubilic and does not reflect
any position or opinion of Southwestern Bell Corporation.
--
Roger V. Thompson, P.E. |ARS AD5T
Southwestern Bell Technology Resources, Inc. |314-529-7847 (Office)
550 Maryville Centre Dr. |314-529-7674 (Fax)
St. Louis, MO 63141 |rvt@calvin.sbc.com

Date: (null)
From: (null)
\Ruben.

--
    Ove Ruben R Olsen a Gnarfer and VI user. Prefered email: ruben@uib.no.
      Maintaining the EX/VI-archive and a couple of Comp.Editors FAQ's.
    People that are ignorant tend to live a frustrated life, at least when
    it comes to editing - But I do believe this is a general rule in life

---

Date: 8 Sep 93 09:47:51 GMT
From: ogicse!emory!wa4mei!ke4zv!gary@network.ucsd.edu
To: info-hams@ucsd.edu

References <26928d$aop@news.delphi.com>>, <N4HY.93Sep7093718@wahoo.ccr-p.ida.org>,
<26jnim$43k@news.delphi.com>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: W9GR DSP KIT ??

In article <26jnim$43k@news.delphi.com> cecilmoo@news.delphi.com
(CECILMOORE@DELPHI.COM) writes:
>
>8-bit A/Ds have a dynamic range of around 50db. 16-bit A/Ds have a dynamic
>range of around 98 db. My personal opinion is that one needs around 70db
>dynamic range for serious CW work. Delat is a typo. Sigma-delta A/Ds
>push most of the quantization noise outside the range of human hearing.
>I know nothing about Timewave's firmware, but their A/D hardware is
>superior to 8-bit systems.
>
>Consider a 5v broadcast heterodyne near a 50 mV CW signal. In an 8-bit
>A/D system the 5v signal doesn't allow enough resolution in the 50 mV
>desired signal while a 16-bit A/D system does. I have not tested any
>commercially available DSP devices but I have given up on trying to
>use an 8-bit A/D for 40M CW. This is only my personal opinion but I
>believe that 8-bit offerings were obsolete when they were introduced.

Ahem, are you seriously saying that there are commercial receivers
on the market that exhibit more than 50 db of dynamic range on their
audio outputs? If we assume that 1 mw is the minimum signal needed
to drive the speaker to audibility, then to get 50 db of dynamic
range, the radio would need to output 100 watts. I've never seen
a ham receiver that did more than about 3 watts, and at 10% THD

at that. That's about 34 db, and well within the capabilities of
an 8 bit system.

AGC or MGC *must* be used to prevent overloading receivers, either
that or we build receivers suitable for a rock concert. That gain
control at IF will push your weak signal below the receiver noise
floor. I think you're expecting too much from audio DSP. It's not
a replacement for all selectivity inside the AGC loop.

Gary
--
Gary Coffman KE4ZV | "If 10% is good enough | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | for Jesus, it's good | uunet!rsiatl!ke4zv!gary
534 Shannon Way | enough for Uncle Sam." | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | -Ray Stevens |

End of Info-Hams Digest V93 #1062
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